UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

IBG LLC and INTERACTIVE BROKERS LLC;

Petitioners

v.

TRADING TECHNOLOGIES INTERNATIONAL, INC.;

Patent Owner

_____

Cases CBM2016-00009

Patent Nos. 7,685,055

_____

**DECLARATION OF HAROLD ABILOCK**

## 1. BACKGROUND AND EXPERIENCE

1.      My name is Harold Abilock.

2.      I am a native speaker of English.

3.      I am fluent in Japanese.

4.      I have a B.S. degree in Computer Science from the State University of New York at Stony Brook (aka Stony Brook University). I have over 25 years of Japanese-English technical and legal translation experience and a background in science, technology, and intellectual property.

5.      I lived in Japan for a total of 13 years. I was a student at Doshisha University (Kyoto) for one year (1973–1974) as a foreign exchange student, during which time I studied Japanese philosophy, literature, and history. I concurrently attended an intensive Japanese-language program (beginner and intermediate levels) at the Kyoto Institute for Japanese Language (Kyoto).

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6.      I subsequently resided in Japan for 12 years (1979–1990), during

which time I studied the Japanese language at the Kyoto Institute for Japanese

Language for two additional years (1979–1981) to attain the advanced level of

proficiency. Subsequently, I studied Japanese-English translation for one year

(1982) at Nakamura Gakko (Kyoto) under the tutelage of the school headmaster—

a professional translator with 35 years of translation experience at that time.

7.      I am a co-founder of JapanLink Translations ("JapanLink"), a

Japanese-English translation firm located in Charlotte, Vermont. A copy of my

resume is attached as Appendix B. Established in 1994, JapanLink specializes in

high-quality translation for patent prosecution and IP litigation cases involving

Japanese-English translation. I am the principal translator.

8.      JapanLink employs in-house technical editors with professional

editing experience. Using a unique and comprehensive quality assurance (QA)

process, our editors check every translation for accuracy and completeness and edit

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them for style, grammar, spelling, and readability. All translation text is carefully

checked for internal coherency and consistency of nomenclature.

9.      In addition to translating IP-related documents, such as patent

applications and office actions, I also translate technical documents, such as

manuals, specifications, standards, academic papers, and press releases. I work

principally in the fields of semiconductor manufacturing equipment,

semiconductor devices, information technology (IT), electronics, optics,

telecommunications, mechanical and electrical engineering, and automotive

engineering.

10.     As a computer engineer, I have coded or supervised the coding of

numerous computer programs, the volume of which exceeds several tens of

thousands of lines of code. In the course of my career as a translator, I have

translated numerous documents in the field of computer software.

11.     I am being compensated at a rate of $225.00 per hour, with reimbursement for actual expenses and for my time. My compensation is not contingent upon the outcome of these proceedings.

**2.     NOMENCLATURE**

12.     In translation, text in the source language is generally referred to as *source text* and translated text is referred to as *target text*. For the sake of clarity in this declaration, I refer to these as the *source Japanese text* and the *English translation text*, respectively. The language of the source text may also be referred to as the *source language*, and the language of the target text may be referred to as the *target language*.

13.     To facilitate explanation, Romanized pronunciations of source Japanese text may be enclosed by braces after the source Japanese text (e.g., 数値 {sū-chi}).

**3. SCOPE OF DECLARATION**

14. I have been retained in connection with the proceedings listed on the cover page of this declaration.

15. Exhibit 1007 of CBM2016-00009 is a Japanese-language document, which I have been informed is the source Japanese text. I have been informed that Exhibit 1008 of CBM2016-00009 contains the corresponding English translation text. I may refer to these documents generally as "TSE" or the "TSE document."

16. I have been asked to examine the source Japanese text in bullet 3 at the top of page 0091 (also marked as TSE0000000737) of Exhibit 1007 and to opine on whether the translator's note on page TSE0000000762 of Appendix A (also marked as TSE0000000762) applies as well to the underlying source Japanese text of page 0091. In my opinion it does.

**4. REFERENCE WORKS**

17. Below is a list of reference works considered in the present declaration.

- Appendix A is my 2007 translation of pages TSE0000000737-766 of TSE.

## 5.    ANALYSIS OF BULLET 3 ON PAGE 0091

18.    Bullet 3 on page 0091, located in the upper part of the page, is

reproduced below from Exhibits 1007 and 1008.

| Source Japanese Text (Exhibit 1007) | English Translation Text (Exhibit 1008) |
|---|---|
| ◆ 板画面において板情報を上下にスクロールした場合でも自動更新を行います。 | ◆ The board information on each Board Screen is automatically updated even if it has been scrolled vertically. |

19.    I have been asked to examine the source Japanese text in <u>bullet 3</u> of

Exhibit 1007 and to opine on whether the translator's note on page

TSE0000000762 of Appendix A applies as well to the underlying source Japanese

text of page 0091.

20.    In my previous translation, attached as Appendix A, I note that I

observed that, with regard to the underlying Japanese source text on page

TSE0000000762 (corresponding to page 0116 of Exhibit 1008), "[i]t is unclear

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from the source Japanese text whether the automatic updating of the board

information takes place only in memory or on the screen as well." My opinion is

that this same ambiguity in the source Japanese text regarding updating is also

present in bullet 3 on page 0091. My reasons for this are discussed below.

21.    The term スクロール画面 {su-ku-rō-ru ga-men} appears to be first

introduced in the second bullet at the top of page 0112 (also marked as

TSE0000000758) in Exhibit 1007, which is translated as *Scrolling Screen* in

Exhibit 1008.

22.    In the source Japanese text, the Japanese reader of the text would

understand page 0091 to be a synopsis of Chapter 7, with more detail provided in

subsequent sections, for example, the details of the *Scrolling Screen* being

described on page 0116.

23.    In bullet 3 of page 0091, the timing with which the automatic

updating occurs is ambiguous. Specifically, the source Japanese text of bullet 3

states that automatic updating occurs even if the *Board Screen* has been scrolled vertically. However, it is unclear in the source Japanese text whether this means that automatic updating occurs <u>while the *Board Screen* is being scrolled</u> (i.e., in the *Scrolling Screen* mode), or only updates in memory while showing the *Scrolling Screen* and subsequently updates the screen <u>after the *Board Screen* has been scrolled</u> and has exited the *Scrolling Screen* mode to return to the *Basic Board Screen* mode. This is the same ambiguity as described on page TSE0000000762 of Appendix A.

24. This ambiguity is confirmed by parts of Exhibit 1007 that show that certain information is not updated in the *Scrolling Screen* mode. For example, page 0112 explains that "OVER" and "UNDER" are not displayed in the *Scrolling Screen* (fourth bullet in ⑭), and page 0115 explains that price display positions are not updated in the *Scrolling Screen* (third bullet below the table). Nor is it clear

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in the source Japanese text at what point any updating occurs. Thus it appears that

updating may occur only in the background.

25. Given the various possible cases for the automatic updating in the

underlying source Japanese text, the underlying source Japanese text of bullet 3 on

page 0091 is ambiguous. Nor does the source Japanese text state whether the

automatic updating is performed one time or continuously, which makes the timing

of the automatic updating further ambiguous. The first bullet of 0091 in the source

Japanese text states that the information is updated every three seconds; it does not

state that the *Scrolling Screen* is updated at the same interval. Nor does the source

Japanese text state whether the automatic updating is performed one time or

continuously, which also makes the timing of the automatic updating further

ambiguous. Thus, it is my opinion that the translator's note on page 28 of my

translation in Appendix A (corresponding to page 0116 of Exhibit 1007) applies

equally to page 0091 of Exhibit 1007 (corresponding to page TSE0000000762 of

Appendix A) in relation to when the automatic updating occurs.

**6.** **CONCLUSION**

26.    I have examined the source Japanese text in <u>bullet 3</u> on page 0091 of

Exhibit 1007 and the English translation text of the corresponding page 0091 of

Exhibit 1008. It my opinion that the translator's note on page TSE0000000762 of

Appendix A, corresponding to page 0116 of Exhibit 1008, applies equally to <u>bullet

3</u> of page 0091.

**7.** **SIGNING**

27.    In signing this declaration, I understand that the declaration will be

filed as evidence in a contested case before the Patent Trial and Appeal Board of

the United States Patent and Trademark Office. I acknowledge that I may be

subject to cross-examination in this case and that cross-examination will take place

within the United States. If cross-examination is required of me, I will appear for

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cross-examination within the United States during the time allotted for cross-examination.

28.  I declare and certify that the proper translations provided by me in this declaration are accurate and correct translations to the best of my knowledge and belief.

29.  I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.
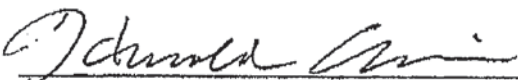
Date: 7/14/2016                    By: _____

Harold Abilock

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# APPENDIX A

# Certification

Document set: TSE737-766 (Chapter 7) (Translation) 2007-05-15.doc

This is to certify that the above-stated document set was translated by Harold Abilock from Japanese to English, and that it represents an accurate and faithful rendition of the original text to the best of my knowledge and belief.

By: ~~Harold Abilock~~     Date: May 15, 2007

Harold Abilock
JapanLink Translations
2087 Ferry Rd.
Charlotte, VT 05445
Tel: 802-425-6145

# Chapter 7: Board and Quotation Information Queries

The Boards & Quotations Screen can be displayed in six types of modes. Furthermore, it is possible to simultaneously display a maximum of 6 issues of board information and 24 issues of quotation information.

The principal features relating to the display of board and quotation information are as below.

- Board and quotation information is automatically updated at three-second intervals.

- A symbol indicating a crossed state is displayed on the Boards & Quotations Screen.

- The board information on each Board Screen is automatically updated even if it has been scrolled vertically.

- Limit-on-close orders are continuously displayed on each Board Screen.

- Orders related to quotations are displayed on each Board Screen in accordance with their actual order placement prices, without aggregating those orders by quotation price.

In addition, board and quotation information queries are basically handled by registering issues in registration pages and then calling up the relevant page.

## 7-1 Page Registration

Board and quotation information queries are basically handled by setting up issues, which constitute the registration information, in a registration page, after which it is possible to query board and quotation information of the issues registered in a page by calling up the relevant page.

Registration pages for issues include "optional setup pages" and "automatic setup pages." The "optional setup pages" enable the user to select optional issues and register them in each client computer. The "automatic setup pages" register issues that are preset by the TSE.

|  | Page No. | Details |
|---|---|---|
| Optional Setup Pages | 1–49 | Optional registration of 24 issues on each client computer |
| Automatic Setup Pages | 50–51 | Automatic setup pages for bond futures contracts |
|  | 55–60 | Automatic setup pages for bond futures options contracts |
|  | 70–71 | Automatic setup pages for index futures contracts |
|  | 75–80 | Automatic setup pages for index options contracts |
|  | Underlying Stock Code | Automatic setup pages for stock options contracts<br>Example<br>Page "1801" is the automatic setup page for the "Tasei Corporation options contract." |

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### 7-1-1 Optional Setup Pages

Each client computer has "Optional Setup Pages" on pages 1–49, wherein up to 24 issues can be registered per page.

In addition to issues that are traded by this system, "stock market indices, such as TOPIX, which are the underlying financial products of each index futures contract and index options contract" and "each underlying stock issue of each stock options contract" can also be registered on each page.

❖ However, registerable issues are limited to those in markets available to each client computer. In addition, each stock market index and each underlying stock issue can be registered only on a client computer for which the index futures market, the index options market, or the stock options market is available.

❖ Each stock market index and each underlying stock issue can be registered as information for a Quotation Screen. When displaying each stock market index and each underlying stock issue on a Board Screen, only the respective names are displayed without any of their information.

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• The operation to register an issue in a registration page can also be performed in the offline state. However, an issue that starts trading the next day cannot be registered until the issue information is received when the online state starts the next day.

• Because registration page information is stored in the client computer, the registration page information and issue information will be deleted if, for example, the hard disk of the client computer fails. In such a case, it will be necessary to perform the registration procedure once again when the client computer comes back online after recovery from the failure.

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The following describes two methods of registering and editing the registration information of an issue in a page.

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### 7-1-1.1 Registration from the Boards & Quotations Screen (Registration by Performing a Board Information or Quotation Information Query Operation)

By performing an issue query operation (issue selection operation) via the Boards & Quotations Screen, the queried issue is registered at the registration issue number displayed in the operation target area on the currently displayed page where the board or quotation information was queried.

☐ After displaying the page that contains the desired issue to be registered on the Boards & Quotations Screen, specify as the operation target area (display the cursor at) that area where the registration issue number of the issue to be registered is displayed.
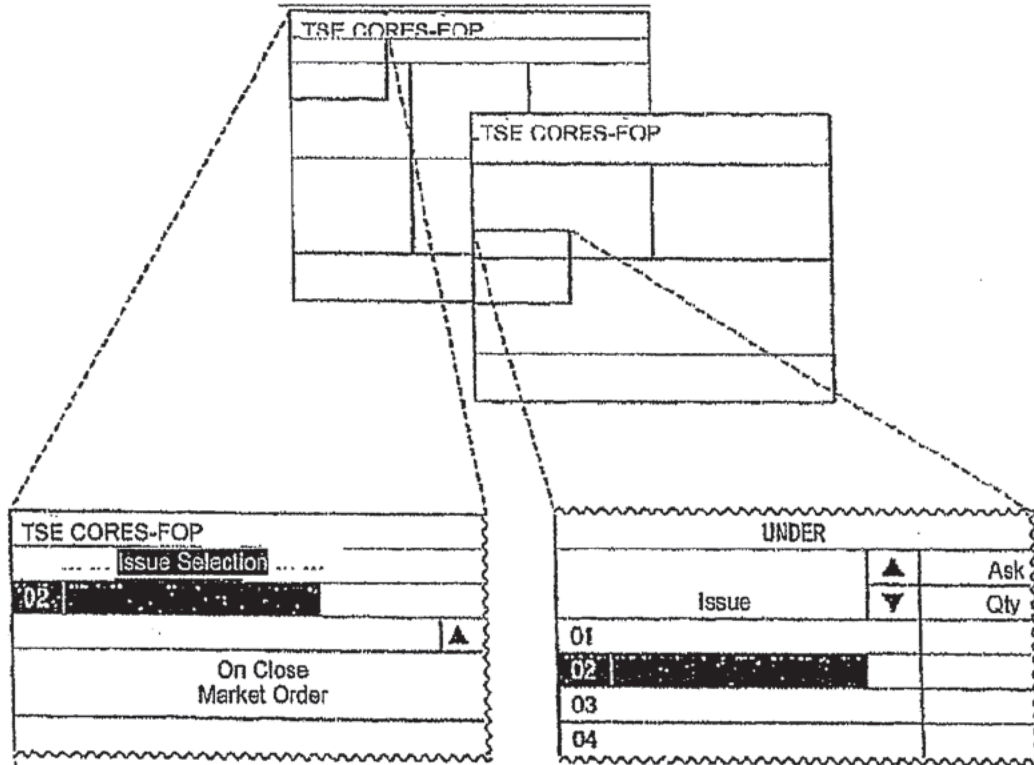


☐ Perform the "Issue Selection Operation" by selecting the "Issue Selection" menu bar in the Main Window. Thereby, the board and quotation information is displayed for the issue that was selected in the corresponding area, and the issue that was selected by the corresponding registration issue number on the corresponding registration page is registered.

⇨ "7-1-1.3 Issue Selection Operation When Registering a Page"

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◇ • Switching the Registration Issue Numbers of Registered Issues on the Boards & Quotations Screen (Switching the Display Positions of Issues for which Board and Quotation Information is Currently Displayed)

By using a mouse to drag the part of the Boards & Quotations Screen where the issue name is displayed, it is possible to switch the issue in the area at the drag source with the issue in the area at the drag destination.

In addition, the switching of issues by this operation also switches the registration order of the two switched issues in the display page.



❖ Use of this function can also simplify the query of board information for issues currently being displayed on a Quotation Screen.

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TT 0109135

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### 7-1-1.2 Registration from the Page Registration Window

An issue can be registered on each page by calling the "Page Registration Window" and performing the registration operation.

In addition to the operation for registering an issue on each page, it is also possible to perform an editing operation, i.e., "insertion" and "deletion" of registration information, from the "Page Registration Window."

☐ From the menu bar in the Main Window, select "Setup" and then "1 Page Registration" (in that order) to display the "Page Registration Window."

```
┌─────────────────────────────────────────────┐
│ ▼ Page Registration                       ▼  │
│ Issue Selection   Setup   Prev. Page   Next Page │
│                                               │
│  Page No.   01  ┌──────────────────────────┐  │
│  (0001)     02  │ Long-Term JGB 012        │  │
│             03  │ Long-Term JGB 103        │  │
│             04  │ Mid-Term JGB 012         │  │
│             05  │ Mid-Term JGB 103         │  │
│             06  │ Long-Term JGB P010-129   │  │
│             07  │ Long-Term JGB P010-130   │  │
│             08  │ Long-Term JGB P010-131   │  │
│             09  │ Long-Term JGB C010-130   │  │
│             10  │ Long-Term JGB C010-131   │  │
│             11  │ Long-Term JGB C010-132   │  │
│             12  │ TOPIX 012                │  │
│             13  │ TOPIX 103                │  │
│             14  │ TPX SP012-103            │  │
│             15  │ BANKS 012                │  │
│             16  │ TPX P010-1275            │  │
│             17  │ TPX P010-1300            │  │
│             18  │ TPX C010-1320            │  │
│             19  │ TPX C010-1350            │  │
│             20  │ TOPIX                    │  │
│             21  │ SONY P010-11000          │  │
│             22  │ SONY P010-12000          │  │
│             23  │ SONY C010-12000          │  │
│             24  │ SONY C010-13000          │  │
│                 │ SONY                     │  │
│                 └──────────────────────────┘  │
│                    ┌────────┐  ┌───────┐     │
│                    │ Update │  │ Close │     │
│                    └────────┘  └───────┘     │
│                                    KB OK      │
└─────────────────────────────────────────────┘
```

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☐ The cursor will be displayed in the "Page Number Input Field," and therefore inputting the page number of the issue to be registered will cause the current registration information of the specified page to be displayed in the right response display field.

❖ When inputting the page number, input four digits (for pages numbers that have less than four digits, enter leading zeros, e.g., "0001"), or press the "Tab Key" after inputting a page number with less than four digits. With either operation, the cursor will leave the "Page Number Input Field" and, at that time, the current registration information of the specified page will be retrieved.

☐ In the Response Display Field, move the cursor to the position of the registration issue number of the issue to be registered, and perform the "Issue Selection Operation" from the "Issue Selection" menu bar in the "Page Registration Window," which will cause the selected issue to be displayed at the position of that registration issue number. Even if another issue is already registered at that registration issue number, it will be overwritten.

⇨ "7-1-1.3 Issue Selection Operation When Registering a Page"

☐ If performing the issue registration operation for another page, then once again input information into the "Page Number Input Field," or select either the "Previous Page" or "Next Page" menu bar item and perform the same operation after the displayed page has switched to the page wherein the registration operation is to be performed.

☐ After the completion of the registration operation for all issues, perform the "Send" operation, which will cause the information for which the registration operation has been performed so far to be registered *en batch* as the information for each page.

♦ "Insertion"

Selecting the menu bar item "Setup" and then "1 Insert" will shift the registration information at and below the registered issue at the cursor position in the Response Display Field downward by one row, and clear the registration information of the registration issue number at the cursor position.

| 01 | Long-Term JGB 012 | | 01 | Long-Term JGB 012 |
|----|-------------------|--------|----|-------------------|
| 02 | Long-Term JGB 103 | INSERT | 02 | Long-Term JGB 103 |
| 03 | Mid-Term JGB 012 | ⇨ | 03 | |
| 04 | Mid-Term JGB 103 | | 04 | Mid-Term JGB 012 |
| 05 | TOPIX 012 | | 05 | Mid-Term JGB 103 |

♦ "Deletion"

Selecting the menu bar item "Setup" and then "2 Delete" will delete the registration information of the registration issue number at the cursor position in the Response Display Field, and the registration information therebelow will be shifted upward.

| 01 | Long-Term JGB 012 | | 01 | Long-Term JGB 012 |
|----|-------------------|--------|----|-------------------|
| 02 | Long-Term JGB 103 | DELETE | 02 | Long-Term JGB 103 |
| 03 | Mid-Term JGB 012 | ⇨ | 03 | Mid Term 103 |
| 04 | Mid-Term JGB 103 | | 04 | TOPIX 012 |
| 05 | TOPIX 012 | | 05 | TOPIX 103 |

TSE0000000742

TT 0109137

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### 7-1-1.3 Issue Selection Operation When Registering a Page

When registering a page, the issue selection operation is performed by selecting the "Issue Selection" menu bar item in the "Main Window" or the "Page Registration Window."
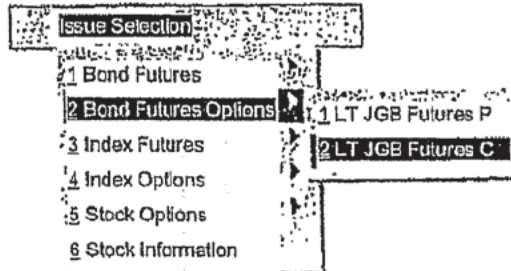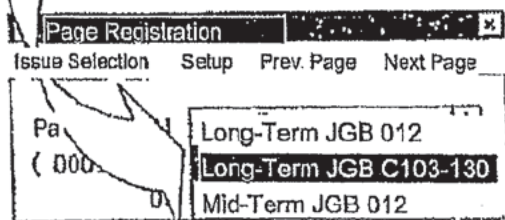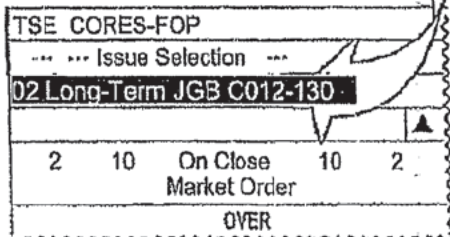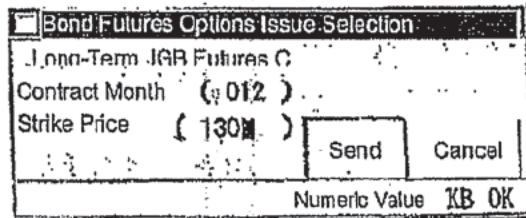


MAIN WINDOW
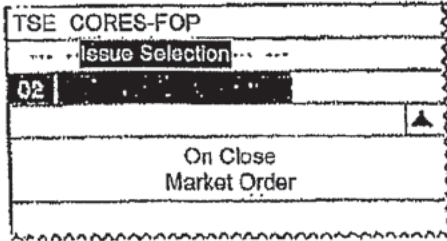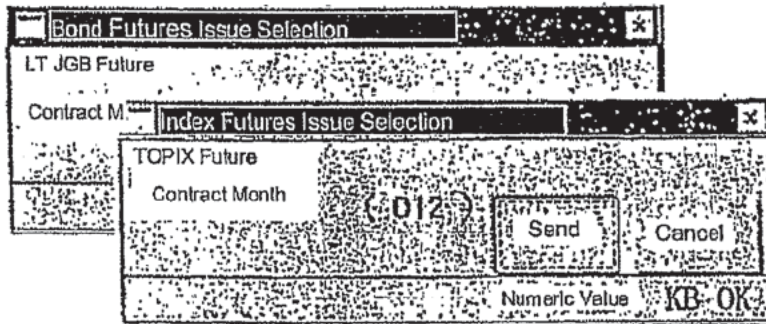
PAGE REGISTRATION WINDOW
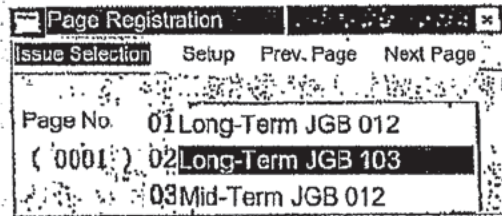
① Select "Issue Selection."

② The "Issue Selection" window is displayed.

TSE0000000743

TT 0109138

♦ Issue Selection Window

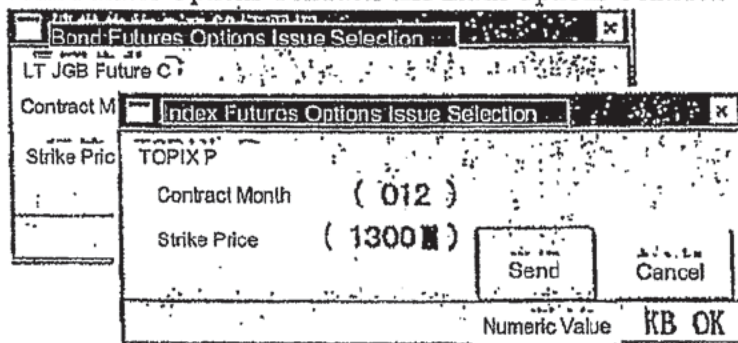◊ Issues of Bond Futures Contracts and Index Futures Contracts



☐ Select the menu bar item "Issue Selection" and then "Market" and "Security Type."
☐ Input the "Contract Month" in the "Issue Selection Window" and then perform the "Send" operation.

◊ Issues of Bond Futures Spread Contracts and Index Futures Spread Contracts
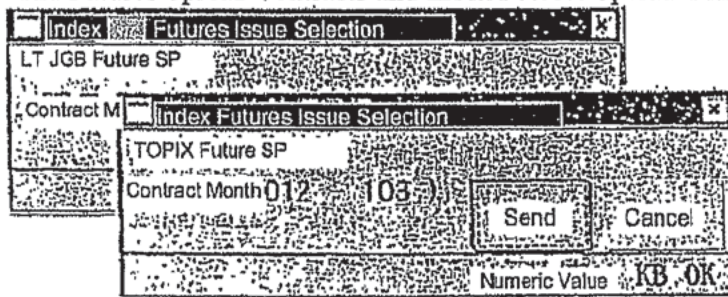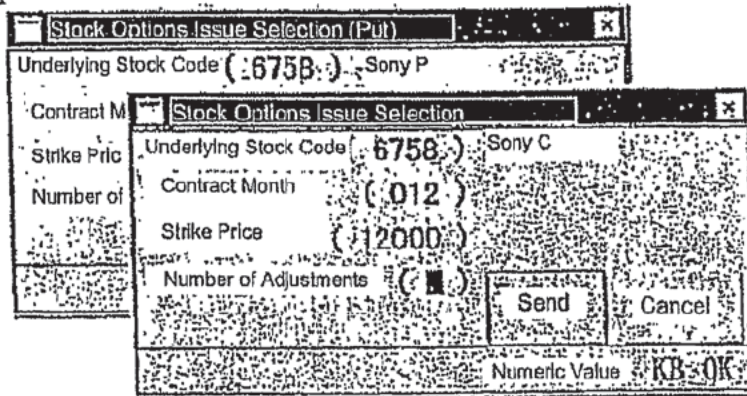


☐ Select the menu bar item "Issue Selection" and then "Market" and "Security Type."
☐ Input the "Contract Month of a Distant Month Futures Contract" and the "Contract Month of a Distant ▨▨ Month Futures Contract" in the "Issue Selection Window" and then perform the "Send" operation.

◊ Issues of Bond Futures Options Contracts and Index Options Contracts
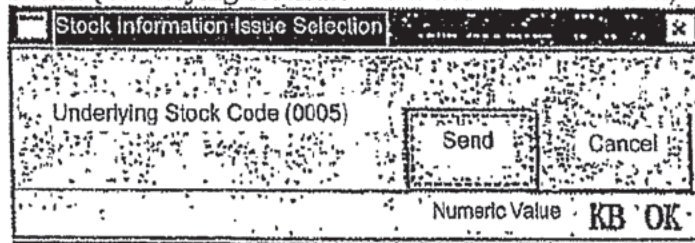


☐ Select the menu bar item "Issue Selection" and then "Market" and "Security Type (Put/Call Type)."
☐ Input the "Distant Month" and the "Strike Price" in the "Issue Selection Window" and then perform the "Send" operation.

TSE0000000744

TT 0109139

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◊　Stock Options Contracts Issue



□　Select the menu bar item "Issue Selection" and then "Market" and "Put/Call Type."

□　Input the "Underlying Stock Issue Code," "Contract Month" and the "Strike Price" in the "Issue Selection Window" and then perform the "Send" operation.

　　❖　Inputting the "Underlying Stock Issue Code" displays the name of the corresponding stock option.

　　❖　When inputting the "Strike Price," input "all digits" if the strike price is less than 100,000 yen, and input by "truncating the last three digits" if 1,000,000 yen or greater.

　　❖　Input information into the "Adjustment Count Input Field" only if specifying an issue that had an adjustment of the delivery unit.

◊　Stock Information (Underlying Stock Issue and Stock Market Index)



□　Select the menu bar item "Issue Selection" and then "Stock Information."

□　Input the "Issue Code" in the "Issue Selection Window" and then perform the "Send" operation.

　　❖　Input the following codes if specifying a "stock market index."

| Stock Market Index | Code |
|---|---|
| TOPIX | 0005 |
| Electrical Equipment | 0030 |
| Transportation Equipment | 0031 |
| Banks | 0032 |

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### 7-1-2 Automatic Setup Pages

In addition to the optional setup pages, there are also "automatic setup pages," wherein issues are registered in a pattern that is preset by the TSE.

Because the issue registration information for automatic setup pages, which differs from that of optional setup pages, is registered for each security type in a format such as "First Contract Month" and "Strike Price of ATM+1 for First Contract Month," the reception of the current day's issue information from the central system updates the registered issues daily to those issues that match the registration information of each automatic setup page.

Example: Registration Information for "Page nn" of the Automatic Setup Pages

| Page nn | |
|---|---|
| Registered Issue No. | Registration Information |
| 01 | "ATM − 1" of first contract month of long-term JGB futures put option |
| 02 | "ATM" of first contract month of long-term JGB futures put option |
| 03 | "ATM + 1" of first contract month of long-term JGB futures put option |

♦  X Month X Day ("ATM" Strike Price of LT JGB Futures Option Contract: 130 JYen)



Strike price for "ATM" on Y Month X day changes to "133 JYen"



⇨ "Appendix 3: Issue Registration Pattern of Automatic Setup Pages"

> The registered issues of automatic setup pages can likewise be updated, and the like, by the same methods as used for optional setup pages. However, after the issue information for the following day is received, the registration details revert to their original setup state. If it is desired to preserve the changed state of the registration details on automatic setup pages, then perform the "Displayed Issues Page Registration" operation.
>
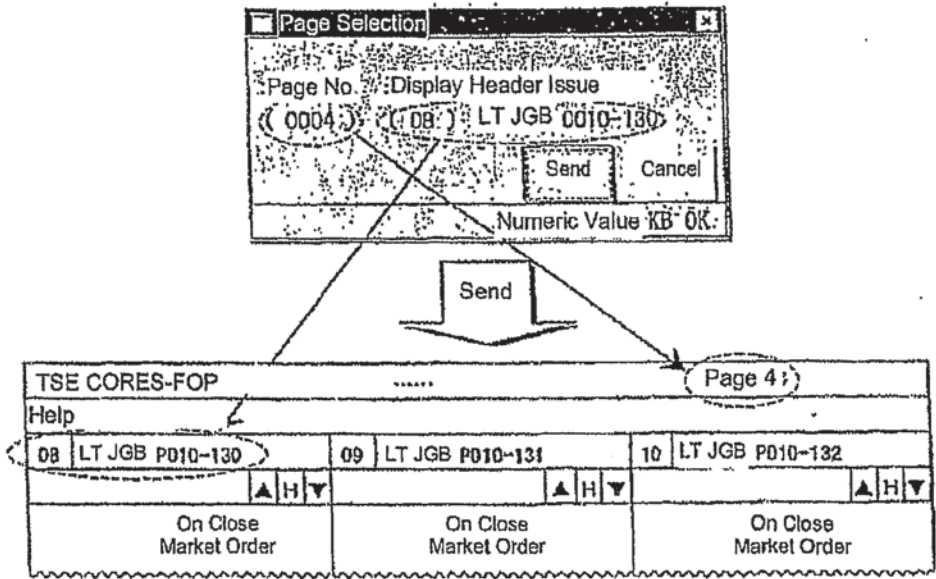> ⇨ "7-1-4 Displayed Issues Page Registration"

TSE0000000746

TT 0109141

### 7-1-3 Calling a Registration Page

Registration pages are called when querying board and quotation information.

### 7-1-3.1 Calling a Registration Page from the Page Selection Window

☐ Select "Page Selection" from the menu bar of the Main Window to display the "Page Selection Window."

☐ In the "Page Number Input Field," input the registered page number that the user wishes to have displayed. In the "Display Header Issue Input Field," input the registration number that is registered in the relevant registration page of the issue that the user wishes to have displayed in the header (Area 1) of the Boards & Quotations Screen.

❖ If the registered issue number is input in the "Display Header Issue Input Field," then the issue name registered in the corresponding registered issue number is displayed.

☐ Performing the "Send" operation will display, in order of registered issue number, the registration pages specified by the Boards & Quotations Screen, with the issue of the specified registered issue number as the header.

❖ If the "Send" operation is performed without inputting information in the "Display Header Issue Input Field," then the issue of the registered issue number "01" of the specified page is always displayed as the header.



### 7-1-3.2 Calling a Registration page by Selecting the "Previous Page" or "Next Page" Menu Bar Item

It is possible to display the previous or next registration page relative to the currently displayed page by selecting the "Previous Page" or "Next Page" menu bar item in the Main Window.

Furthermore, in that case, the header registered issue number of the registration page currently displayed is carried forward.

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### 7-1-4 Displayed Issues Page Registration

The "Displayed Issues Page Registration" operation is performed if it is desired to preserve the state obtained after performing the operation to update the registered issues of automatic setup pages and the like.

Displayed issues page registration is an operation that registers, in the optional setup pages of the specified pages 1–49, the information of the registration pages that are displayed on the Boards & Quotations Screen.

In that case, the information of displayed registration pages is overwritten even if issues have already been registered in specified optional setup pages.

☐ Call up the registration page (automatic setup page after performing the update registration operation on the registered issues), wherein the information to be preserved is registered, onto the Boards & Quotations Screen.

☐ From the menu bar of the Main Window, select "Setup" and "2 Displayed Issues Page Registration" (in that order) to display the "Displayed Issues Page Registration Window."
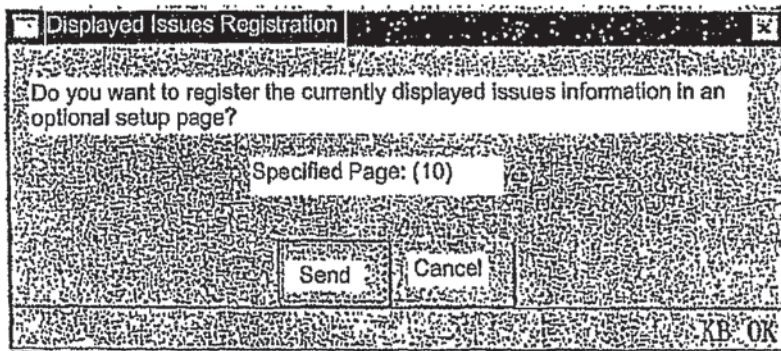


☐ In the "Specified Page Input Field," input the optional setup page to be preserved and then perform the "Send" operation.

☐ If an issue is already registered in the optional setup page to be preserved that was input in the "Specified Page Input Field," then the "Displayed Issues Page Registration Process Confirmation Window" will be displayed. If it is acceptable to overwrite the information, then perform the "Send" operation.



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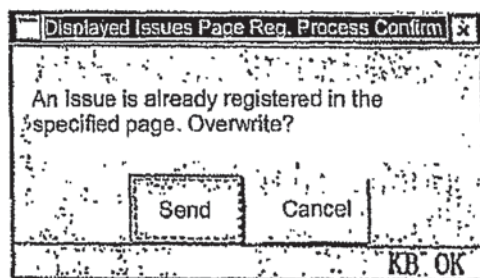
## 7-2 Split Screen Modes

As needed, please select one of the six types of display modes for the "Boards & Quotations Screen."

### 7-2-1 Types of Split Screen Modes

The "Boards & Quotations Screen," which displays the board and quotation information, can be displayed in the following six types of modes.

#### 7-2-1.1 Boards x 2

This mode splits the Boards & Quotations Screen into two parts and displays board information for two issues simultaneously.
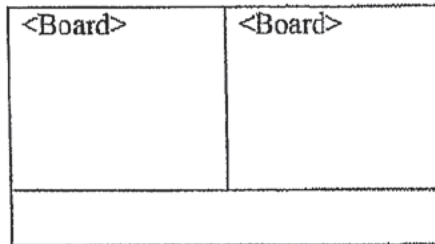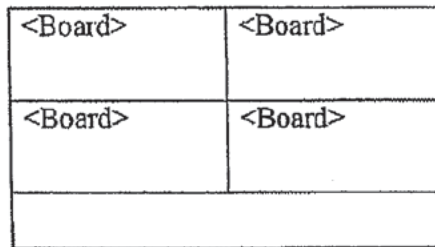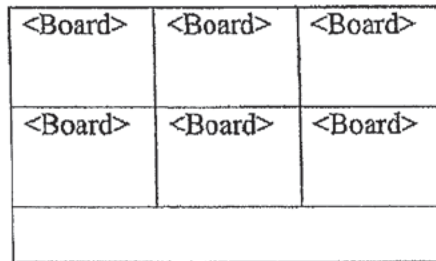


#### 7-2-1.2 Boards x 4

This mode splits the Boards & Quotations Screen into four parts and displays board information for four issues simultaneously.



#### 7-2-1.3 Boards x 6

This mode splits the Boards & Quotations Screen into six parts and displays board information for six issues simultaneously.



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### 7-2-1.4 Boards x 2 + Quotation

This mode splits the Boards & Quotations Screen into three parts and displays board information for two issues and quotation information for 11 issues simultaneously.

| <Board> | <Board> |
|---|---|
| <Quotation> (11 Issues) | |
| | |

### 7-2-1.5 Boards x 2 [sic] + Quotation

This mode splits the Boards & Quotations Screen into four parts and displays board information for three issues and quotation information for 11 issues simultaneously.

| <Board> | <Board> | <Board> |
|---|---|---|
| <Quotation> (11 issues) | | |
| | | |

### 7-2-1.6 Boards x 2 [sic] + Quotation

This mode displays quotation information for 24 issues (all registered issues of the displayed page) simultaneously using the entire Boards & Quotations Screen.

❖ Enables the display of a list of issues that are registered in the displayed page.

| <Quotation> (24 issues) |
|---|
| |
| |

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### 7-2-2 Selection of Split Screen Mode

The split screen mode of the Boards & Quotations Screen can be changed by the operation below.

### 7-2-2.1 Change the Mode from the "Split Screen" Menu Item

☐ Select the "Split Screen" menu bar item in the Main Window.
☐ Select a split screen mode from the "Split Screen" menu list.
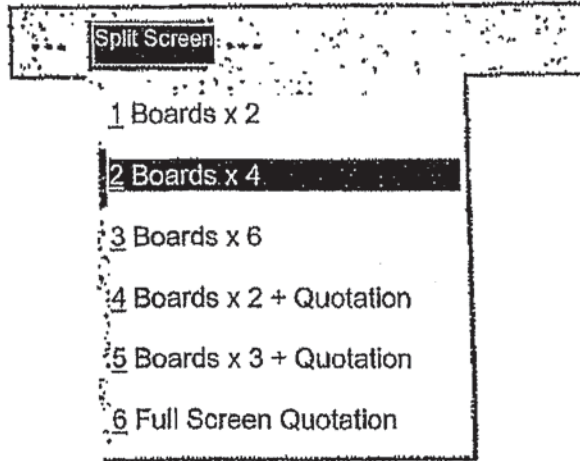


### 7-2-2.2 Select the Mode from the Shortcut Menu Using a Right-Click

☐ Use the mouse to right-click on the Boards & Quotations Screen.
☐ Select a split screen mode from the displayed shortcut menu.
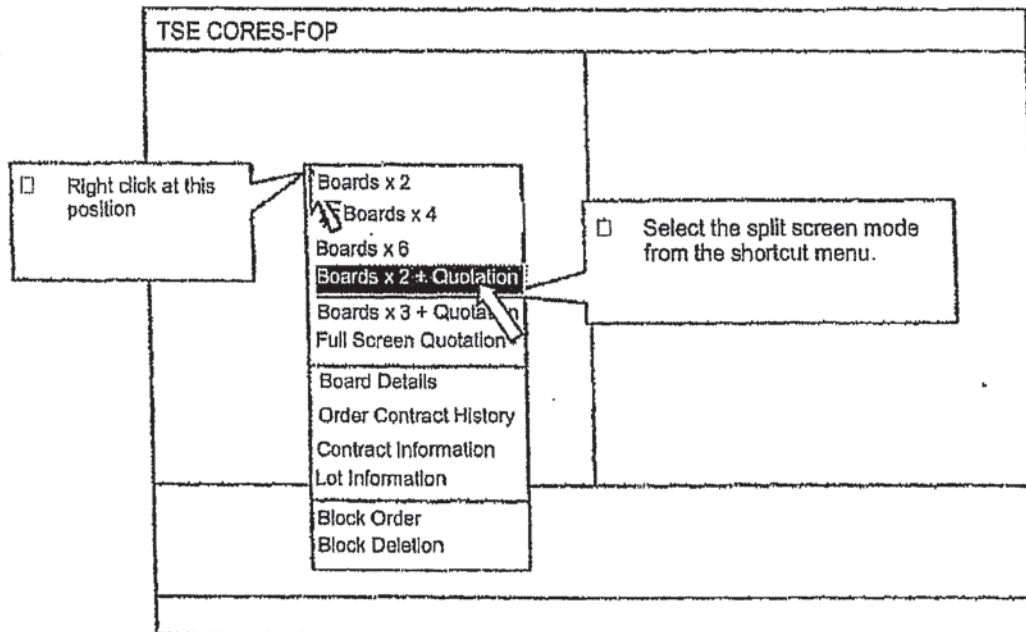


⇨ "3-5 Display of the Shortcut Menu by Right-Clicking the Mouse"

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## 7-2-2.3 Display Order of Issues When Changing the Split Screen Mode

When the split screen mode is changed, the issue displayed in the header is the issue whose registration issue number is displayed in the operation target area (including the right-clicked area) in the Boards & Quotations Screen during the change operation.

* "Boards x 2, 4, 6" → "Boards x 2, 4, 6"

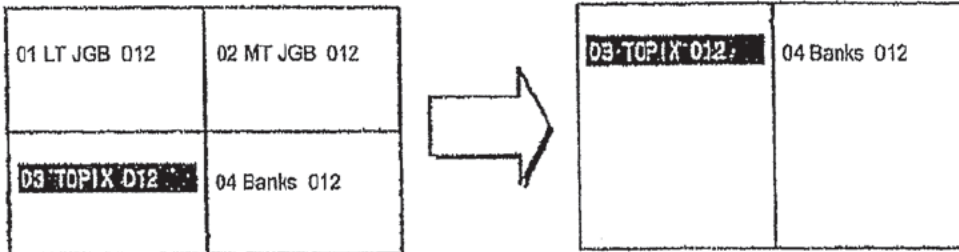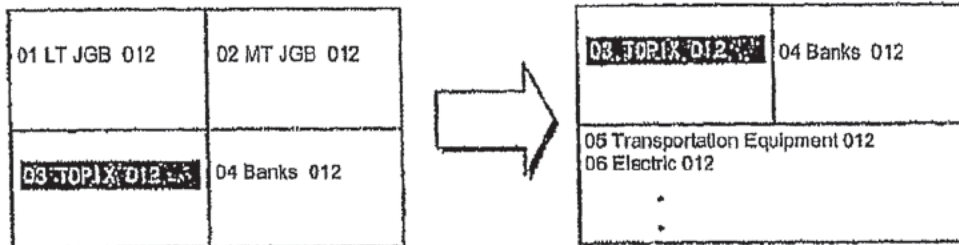| 01 LT JGB 012 | 02 MT JGB 012 |
|---|---|
| 03 TOPIX 012 | 04 Banks 012 |

→

| 03 TOPIX 012 | 04 Banks 012 |
|---|---|

* "Boards x 2, 4, 6" → "Boards x 2, 3 + Quotation Screen"

| 01 LT JGB 012 | 02 MT JGB 012 |
|---|---|
| 03 TOPIX 012 | 04 Banks 012 |

→

| 03 TOPIX 012 | 04 Banks 012 |
|---|---|
| 05 Transportation Equipment 012<br>06 Electric 012 | |

* "Boards x 2, 3 + Quotation Screen " → " Boards x 2, 3 + Quotation Screen "

| 01<br>LT JGB 012 | 02<br>MT JGB 012 | 03<br>TOPIX 012 |
|---|---|---|
| 04 Banks 012<br>05 Transportation Equipment 012 | | |

→

| 03 TOPIX 012 | 04 Banks 012 |
|---|---|
| 04 Banks 012<br>05 Transportation Equipment 012 | |
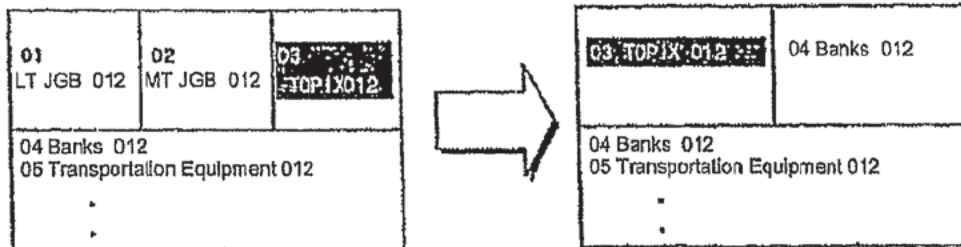
❖ The display order on just the Board Screens change, not the Quotation Screen.

* "Any Split Screen Mode" → "Full Screen Quotation"

| 01 LT JGB 012 | 02 MT JGB 012 |
|---|---|
| 03 TOPIX 012 | 04 Banks 012 |

→

| 01 LT JGB 012<br>02 MT JGB 012<br>03 TOPIX 012<br>05 Transportation Equipment 012<br>06 Electric 012 |
|---|
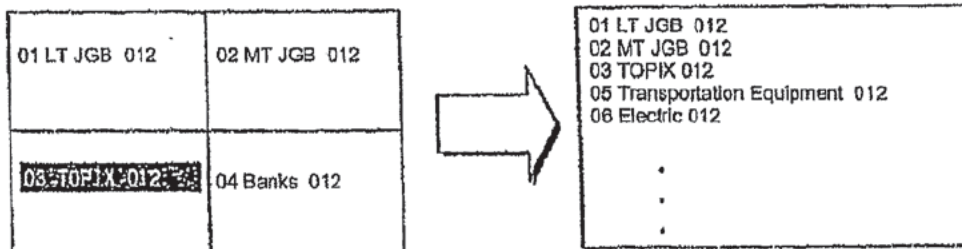
❖ Regardless of the position of, for example, the area specified by the operation, all registered issues for the relevant page are displayed.

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## 7-3 Board Screen

### 7-3-1 Board Screen Display Items

♦ Board Screen Split into Two Parts

This is displayed when the "Boards x 2" split screen mode is selected.



| ① | ② | | | ③ | | | | | ⑥ |
|---|---|---|---|---|---|---|---|---|---|
| Zaraba 01 | LT JGB 012 | | | Reference 13296 | | | | | |
| ④ K13320 (13:17) ( 2012) | | | ⑤ ▲ H ▼ | | | | | | |
| ⑧ 10 | | 250 | On Close | 250 | Ⓑ 15 | | | Whole Day Session | ⑱ |
| ⑨ Note | | | Market Order | 10 | 1 Ⓘ | | | O 13291 | |
| | 157 | 1810 | OVER | | | | | ( 9:05) | |
| 2 | 1 | 3 | 13029 | | | | | H 13320 | |
| 2 | 4 | 132 | 13028 | | | | | ( 9:46) | |
| | 4 | 145 | 13027 | | | | | L 13274 | |
| | 2 | 70 | 13026 | | | | | ( 9:10) | |
| 5 | 2 | 29 | 13025 | | | | | P 13310 | |
| | 1 | 20 | 13024 | | | | | (13:16) | |
| | 1 ▓▓▓▓ 5 | | 13023 # ⑮ | | | 5 | | ( 2021) | |
| | ⑰ | | 13022 | | | | | C +13 | |
| 10 | | | 13021 | | | | | | |
| | | | 13020 K ⑯ | | | | | V 42588 | |
| | | | 13019 | 17 | 3 | | | L5 13005 | ⑲ |
| | | | 13018 | 47 | 1 | | | (13:14) | |
| | | | 13017 | 5 | 6 | | | L4 13008 | |
| | | | 13016 | 36 | 3 | | | (13:15) | |
| | | | 13015 | 44 | 6 | 2 | | L3 13009 | |
| | | | 13014 | 46 | 2 | | | (13:15) | |
| | | | 13013 | 123 | 5 | | | L2 13008 | |
| | | | 13012 | 141 | 3 | | | (13:16) | |
| | | | 13011 | 2 | 4 | | | L1 13009 | |
| | | | 13010 | 817 | 3 | | | (13:16) | |
| | | | UNDER | 6084 | 169 | | | W 5 | ⑳ |

⑭ ⑬ ⑫ ⑪ ⑫ ⑬ ⑭

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• **Board Screen Split into Four Parts**

The following is displayed when the "Boards x 4" or "Boards x 2 + Quotation" split screen mode is selected.

```
①            ②                              ③        ⑥
Itayose 02   TOPIX O12        Reference 13295   1276.37
④ u13320(13:17)          ⑤ ▲ H ▼  Whole Day   ⑩
⑧  10                       ⑧15 0   Session  13290
⑨ Note          On Close
                Market Order    10    1  ⑩  ( 9:05)
        27   348    OVER              H   13320
     2   1     3    13013 # ⑮            (10:46)
     2   4   132    13012              L   13275
        4   145    13011                 ( 9:10)
        ⑰          13010K ⑯          P   13310
                   13009      29   8     (13:16)
                   13008      46  12  C    +15
                   13007           5
                   UNDER     124      V   73356
  ⑭ ⑬ ⑫          ⑪       ⑫ ⑬ ⑭
```

• **Board Screen Split into Six Parts**

The following is displayed when the "Boards x 6" or "Boards x 3 + Quotation" split screen mode is selected.

```
①            ②            ⑦
Zaraba 01   Sony  PO12-9500  V   588
④ U4700(13:17)       ▲ H ▼ ⑤
   1     2    On Close       2   1
              Market Order
   7    45    OVER
   1     3    5200
              5100 ⑰
   2     2    4900
              4800
        ⑯ U   4700
   1     5    4600 # ⑮   10    2
              4500
              UNDER      12    3
  ⑬   ⑫    ⑪       ⑫   ⑬
```

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☐ Board Status

This screen portion displays the current status of the displayed issue.
- "Blank": From Online Start until Order Acceptance Start
- "Accepting Orders": From Accepting Orders until Floor Start
- "Before Session Start (*Yorimae*)": From Floor Start until Opening Price Determination
- "Continuous Session (*Zaraba*)": From Opening Price Determination until Order Acceptance Close
- "Order Close": From Order Acceptance Close until Closing Price Determination
- "Morning Close": From Morning Session Close until Afternoon Session Order Acceptance Start
- "Close": From Current Day's Floor Close until Online Termination
- "Order Halt": Order Acceptance Halted

❖ The issue is displayed in "White" reverse video when an order is generated that is waiting for processing.

☐ Registered Issue Number and Issue Name

- Registered Issue Number
  This screen portion displays the "registration number" in the display page for the displayed issue.
- Issue Name
  This screen portion displays the "issue name" for the displayed issue.
  ⇨ "Chapter 4: Financial Products Traded"
  ❖ If the issue is a stock option contract, then its "delivery unit" is displayed after the issue name when the Board Screen is split into two or four parts.

  ❖ If a currently displayed issue is the operation target, then the registered issue number and the issue name are displayed in "Yellow" reverse video.

☐ Current Day's Reference Price

This screen portion displays the current day's reference price.
❖ In the following cases, a symbol is displayed before the reference price.
◊ "u": If the reference price is the previous day's last special ask quotation price.
◊ "k": If the reference price is the previous day's last special bid quotation price.
◊ "*": If the reference price is determined by the TSE.

☐ Quotation and Message

This screen portion displays the quotation and a message.
- Quotation
  ◊ Bond Futures and Bond Futures Options Issue
    • Special quotation not posted by the *itayose* matching method
      "U/K" + quotation price + display time (+ yield)
    • Special quotation posted by the *itayose* matching method
      "u/k" + quotation price + display time (+ yield) + net quantity
  ❖ "Yield" is displayed only for a bond futures contract issue (excepting a spread issue) when the Board Screen is split into two parts.

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◊ Index Futures, Index Options and Stock Options

- • Cautionary quotation
  "U/K" + quotation price + display time
- • Special quotation
  "u/k" + quotation price + display time + net quantity

❖ In the following cases, a symbol is displayed before the quotation.

- • "G": Indicates a possibility that, for the currently displayed special quotation posted by the *itayose* matching method, a contract may be concluded at a price that is beat out by a trade executed at the close of the trading floor due to the participation of a on-close limit order.
- • "T": If the currently displayed quotation price was revised.

- ◆ Service-related message
  - ◊ "*Itayose* (hh:mm)": Displayed if processing by the *itayose* matching method.
  - ◊ "Halt (hh:mm)": Displayed if trading is temporarily halted.
  - ◊ "Failure (hh:mm)": Displayed if trading is halted due to a failure of the central system.

- ◆ Error message
  - ◊ "ERROR: Query off-hours": Displayed if a board query is made outside of the time when queries can be made.
  - ◊ "ERROR: Issue code": Displayed if a board query is made for an issue that cannot be traded.

❖ There are other cases in which a failure message is displayed.

⇨ "15-6 Failure Message of the Terminal System"

❑ Scroll Buttons and Home Button

| ▲ | Clicking this button with the mouse scrolls the prices upward one price at a time. |
|---|---|
| ▼ | Clicking this button with the mouse scrolls the prices downward one price at a time. |
| H | Clicking this button with the mouse after the board information has been scrolled causes the screen to return to the Basic Board Screen, with the board display center price at the center. |

❖ During scrolling, the "H" is displayed in "Red."
⇨ "7-3-3 Scrolling of Board Information"

❑ Price of Underlying Security

This screen portion displays the current price (including special quotation price) and day-to-day change (excepting when a special quotation price is displayed) of the underlying security of the displayed issue when the Board Screen is split into two or four parts.

However, the day-to-day change is not displayed when the Board Screen is split into four parts.

- • Bond futures options issue:           Target contract month of the bond futures
- • Index futures issue and index options issue:   Target index
- ◆ Stock options issue:                  Target underlying stock

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❖ The underlying stock of the stock options security is displayed by dropping digits in accordance with its price level.

◊ < 100,000 JYen:  Display all digits.

◊ ≥ 100,000 JYen:  Display by dropping lowest-order three digits.

❖ Due to a lag in the transmission timing of update information for the price of an underlying security, the price of different issues with the identical underlying security may be displayed with different prices.

☐ Current Day's Trading Volume

This screen portion displays the current day's trading volume only when the Board Screen is split into six parts.

☐ Total Number of Orders Not Executed

This screen portion displays the total number of orders not executed.

❖ Unexecuted orders are treated as limit price orders, added to each limit price, and then displayed together with the total number in the display field.

☐ Message that Notice Information Is Present

This screen portion displays "Note" if notice information has been generated.

❖ If this message is displayed, then please query the "Notice Information" and confirm the details.

⇨ "10-11: Notice Information Query"

☐ Board Automatic Update Halt Message

This screen portion displays "Board Halt" if the process of automatically updating board information has halted due to the occurrence of, for example, a failure in the central system.

❖ If the board information automatic update process has halted and this message is displayed, then it is possible to query the latest status of the board information for the currently displayed issue by pressing the "Send (Enter)" key.

☐ Order Price

This screen portion displays the order price (market order, on close, or limit price). In addition, the limit price portion is displayed with "20 Prices" when the Board Screen is split into two parts, and "7 Prices" when the Board Screen is split into four or six parts.

♦ The limit price is displayed using the pricing unit of the displayed issue.
⇨ "Chapter 4: Financial Products Traded"

♦ The method of displaying the order price can be selected from either of the following.

◊ "Uncompressed Price Display Mode" (mode that displays all prices)

◊ "Compressed Price Display Mode" (mode that displays only designated prices, such as a price for which there is an order)

⇨ "6-2: Setup of Price Display Method for Board Screen"

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- ◆ The last contract price (if prior to determining the current day's opening price, then the current day's reference price) is displayed in "Yellow."
- ◆ There is a "Basic Board Screen," which displays prices with the "Board Display Center Price" at the center, and a "Scrolling Screen" that is in a state wherein the display has been scrolled.
  - ⇨ "7-3-2 Board Display Center Price"

☐ Order Quantity     ☐ Order Count     ☐ On-Close Limit Order Quantity

These screen portions display the order quantity, the order count, and the on-close limit order quantity for each order price.

- ◆ Unexecuted orders are treated as limit price orders, added to each limit price, and then displayed together with the total number in the display field; that total quantity is also displayed in the "Total Unexecuted Order Quantity Field."
- ◆ The "On-Close" field displays only on-close orders.
- ◆ The total quantity of orders for which the price exceeds the displayed prices is displayed in the "OVER" row, and the total quantity of orders for which the price is below the displayed prices is displayed in the "UNDER" row.
- ◆ The "OVER" and "UNDER" rows are not displayed when the board information is scrolled. (These are displayed only when the Basic Board Screen is displayed.)
- ◆ When cautionary quotations or special quotations are displayed, any orders placed with respect to those quotations are displayed with the actual price of the placed order— without aggregating the orders by quotation price.

☐ Crossed-State Symbol

If there is a crossed state, one of the symbols below is displayed after the cross trade price.
- ◆ "#": Indicates a price for which the buy and sell orders can be matched.
- ◆ "*": Indicates a price for which the TSE must determine whether the buy and sell orders can be matched.
  - ❖ However, if there are multiple cross trade prices when the *itayose* matching method is in effect, then "#" is displayed after the cross trade price that is closest to the reference price, and "*" is displayed after the other prices.

☐ Quotation Symbol

During the display of a quotation, one of the symbols below is displayed to the left of the price if it is for an ask quotation, and to the right of the price if it is for a bid quotation.

- ◆ Bond Futures and Bond Futures Options Issues
  - ◊ Special quotation not posted by the *itayose* matching method
    - • Ask Special Quotation: "U"     Bid Special quotation: "K"
  - ◊ Special quotation posted by the *itayose* matching method
    - • Ask Special Quotation: "u"     Bid Special quotation: "k"
- ◆ Index Futures, Index Options, and Stock Options Issues
  - ◊ Cautionary quotation
    - • Ask Special Quotation: "U"     Bid Special quotation: "K"
  - ◊ Special quotation
    - • Ask Special Quotation: "u"     Bid Special quotation: "k"

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☐ Cursor

If a Board Screen is the operation target, then the "Cursor" is displayed in the "Order Price Field," "Order Quantity Field," "Order Count Field," "On-Close Limit Order Quantity Field" and "Total Unexecuted Order Quantity Field."

- ◆ The "Cursor" can be moved by pressing the arrow keys.
- ◆ To move the "Cursor" from an area where a limit order is displayed to an area where a Market Order or On-Close Order is displayed, press the "Shift" + "↑" keys.
- ◆ By positioning the display of the "Cursor," it is possible to automatically set up the relevant display position information when displaying the "New Order Entry Window," and to omit the step of inputting a query when querying the "Board Details."

    ⇨ "9-2-2 Order Placement from the New Order Entry Window"
    ⇨ "10-2 Board Details Query"

☐ Supplementary Information

Either "Four Prices (All Day or By Session)" or "Time Series (Five)" for the displayed issue is selected and displayed when the Board Screen is split into two or four parts.

    ⇨ "6-1 Setup of Supplementary Information Type for Boards & Quotations Screen"

- ◆ Board Screen Split into Two Parts
  The "All Day Four Prices" display or the "Four Prices by Session" display can be selected.

  The items of the Four Prices Display when the Board Screen is split into two parts differs somewhat, as described below, depending on the type of transaction.



| | Bond Futures Contract Issue | Index Futures Contract Issue | Options Contract Issue |
|---|---|---|---|
| ☐ | "Whole Day Session," "Morning Session" or "Afternoon Session" | | |
| ☐ | Opening Price | | |
| ☐ | Opening Price Time | | |
| ☐ | High Price | | |
| ☐ | High Price Time | | |
| ☐ | Low Price | | |
| ☐ | Low Price Time | | |
| ☐ | Current Price | | |
| ☐ | Current Price Time | | |
| ☐ | Yield | Day-to-Day Change | IV |
| ☐ | Day-to-Day Change | – | Day-to-Day Change |
| ☐ | Final Special Quotation | | |
| ☐ | Current Day's Transaction Volume | | |

- ❖ The items displayed for the issues of bond futures spread contracts are the same as those for the issues of index futures contracts.

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- ◆ Board Screen Split into Four Parts
  It is possible to display the "All Day Four Prices," "Four Prices by Session" or "Time Series (Five)" display.

  - ❖ If "Four Prices by Session" is displayed, then the four prices of the morning session are deleted when trading on the floor starts in the afternoon session, at which time the screen switches to the afternoon session display.

  - ❖ The price is displayed as "-" if the trade is unexecuted.

  - ❖ The day-to-day change is displayed as "−" if the trade is unexecuted or if there is no previous day's contract price.

  - ❖ "E" is displayed as the current price if it is the closing price, and "G" is displayed before the price if the quotation was beat out when it closed.

  - ❖ When the Board Screen is split into two parts and "Four Prices" are displayed, the implied volatility (IV) is displayed for the point in time when the current price was established. Furthermore, "0.01" is displayed if the IV calculation cannot be performed, such as when an option is out-of-the-money.

☐ Time Series Prices

When the Board Screen is split into two parts, this screen portion continuously displays the five price levels prior to the latest price.

  - ❖ The time series prices of the morning session are deleted at the start of floor trading in the afternoon session.

☐ Count of Orders Awaiting Processing

When the Board Screen is split into two parts, this screen portion displays the number of orders waiting to be processed when orders are generated that are awaiting processing.

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## 7-3-2 Board Display Center Price

♦ A Board Screen that does not scroll is called a "Basic Board Screen," wherein the display of the board information is updated so that the "Board Display Center Price" is continuously displayed at the center part of the board. The "Board Display Center Price" is determined in accordance with the priority order listed in the table below.

| Floor Status | Priority Order of Price that Serves as the Board Display Center Price |
|---|---|
| Before Determination of Opening Prices | ☐ Special quotation price<br>☐ Reference price |
| During *Zaraba* | ☐ Cautionary/special quotation price<br>☐ If there is a sell or buy order that has priority higher then the last contract price, then that order price<br>☐ Last contract price |
| After Floor Closing | ☐ Final special quotation price<br>☐ Closing price<br>☐ If there is neither a contract nor a final special quotation price for the current day, then the current day's reference price |

♦ In a "Basic Board Screen" in the "Uncompressed Price Display Mode," the "Three Prices Up and Down" item is set when the Board Screen is split into two parts, and "Floating Display Area" of the "Board Display Center Price" of the "One Price Up and Down" item is set when the Board Screen is split into four or six parts, and therefore the price at the center part of a board is automatically revised and displayed if that range is exceeded. [Translator's Note: It is not clear from the source Japanese text whether the automatic revising and displaying of the price at the center part of a board is performed continuously.]

♦ In the "Compressed Price Display Mode," the "Board Display Center Price" is automatically revised and displayed continuously at the center part of the board.

♦ In addition, in a "Scrolling Screen," the price display positions do not change automatically.

Example of Automatically Revised Display: Uncompressed Price Display / Board Screen Split into Six Parts (Floating Display Area with One Price Up and Down)



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### 7-3-3 Scrolling of Board Information

To view price information that is above or below the range of prices displayed on a "Basic Board Screen," a board information scrolling operation is performed by any of the methods below.

- ◆ Use the mouse to click the "▲" or "▼" scroll button on the Board Screen.

  → The screen is scrolled by "1 Price" at a time.

- ◆ Vertically move the cursor on the Board Screen by pressing the arrow keys on the keyboard.

  → The screen is scrolled by "1 Price" at a time.

- ◆ Press the "Up" or "Down" key on the keyboard.

  → The screen is scrolled by "10 Prices" at a time when the Board Screen is split into two parts, and "3 Prices" at a time when the Board Screen is split into four or six parts.

In addition, it is possible to return from a "Scrolling Screen" to a "Basic Board Screen" by the methods below.

- ◆ Use the mouse to click the "H" (Home) button on the Board Screen.

- ◆ Press the "Home" key on the keyboard.

> - ◆ Board information is automatically updated even if the screen has been scrolled. [Translator's Note: It is unclear from the source Japanese text whether the automatic updating of the board information takes place only in memory or on the screen as well.]
>
> - ◆ The information of the OVER and UNDER fields is not displayed if the screen is scrolled.
>
> - ◆ The "H" button on the Board Screen is displayed in "Red" during the display of a Scrolling Screen.

Example of Scrolling Operation



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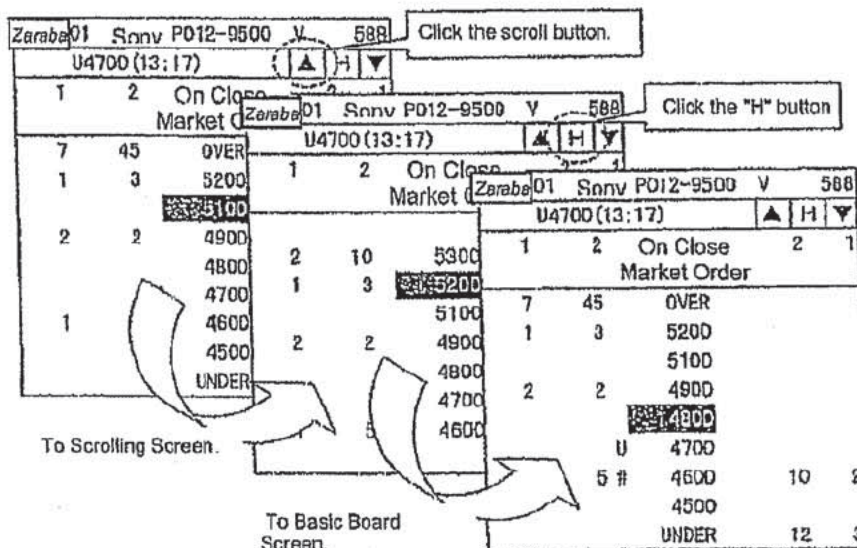
## 7-4 Quotation Screen

### 7-4-1 Quotation Screen Display Items

The Quotation Screen is displayed when the "Board x 2 + Quotation," "Board x 3 + Quotation," or "Full Screen Quotation" split screen mode is selected. When the "Board x 2 + Quotation" or "Board x 3 + Quotation" mode is selected, quotation information for 11 issues is displayed. When "Full Screen Quotation" is selected, quotation information for 24 issues (maximum number of issues that can be registered on one page) is displayed.

| | Issue | ⑪ | ▲ ▼ | Ask Quotation (A) | | Bid Quotation (B) | |
|---|---|---|---|---|---|---|---|
| | | | | Quantity | Price | Price | Quantity |
| 01 | Sony P012-11000 | Note | | 10 | #1000 | K900 | 5 |
| 02 | Sony P012-12000 | Note | | 8 | 3300 | 3200 | 10 |
| 03 | Sony P012-13000 | Note | | ⑤ | | k 8450 | 12 |
| 04 | Sony C012-11000 | Note | | 2 | 16100 | 16050 | 1 |
| 05 | Sony C012-12000 | Note | | | | | |
| 06 | Sony C012-13000 | Note | | | U3650 | | |
| 07 | Sony | | | 21 | 13000 | 12500 | 26 |
| 08 | TOPIX | | | | | | |

①　　②　③　④　　④　　③

| Current Price (P) | | | All Day Session | | | Trade Vol. |
|---|---|---|---|---|---|---|
| Price | Time | Change | O | H | L | (V) |
| 850 | 13:21 | — | 800 | 850 | 800 | 5 |
| 3300 | 13:20 | +100 | 3200 | 3250 | 3000 | 24 |
| | | | | | | |
| 16050 | 12:59 | — | 16000 | 16200 | 15950 | 12 |
| 8550 | 12:30 | | | | | |
| 3700 | 13:19 | −250 | 3900 | 3950 | 3650 | 20 |
| 12900 | 13:22 | +900 | 12000 | 13200 | 12000 | 85600 |
| 131278 | 13:22 | +1223 | 130125 | 131546 | 130125 | |

⑥　　⑦　　⑧　　⑨　　　　⑩

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☐ Registered Issue Number and Issue Name
  ◆ Registered Issue Number
    This screen portion displays the "Registered Number" of each displayed issue in the display page.
  ◆ Issue Name
    This screen portion displays the "Issue Name" of each displayed issue.
      ⇨ "Chapter 4: Financial Products Traded"
        ❖ If a displayed issue is the operation target, then the "Registered Issue Number" and the "Issue Name" are displayed in "Yellow" reverse video.

☐ Message that Notice Information Is Present/Error Message
  ◆ Notice Information Present Message
    This screen portion displays "Note" if notice information has been generated.
      ❖ If this message is displayed, then confirm the details by querying the "Notice Information."

        ⇨ "10-11 Notice Information Query"

  ◆ Error Message
    This screen portion displays "ER" if an error occurs in a quotation information query of a displayed issue.

☐ Quotation Quantity
  This screen portion displays the ask quotation quantity or the bid quotation quantity (except when the underlying index is displayed).
  ◆ When "General Quotation Price" Is Displayed
      The order quantity of the highest priority quotation price is displayed.
  ◆ When "Special Quotation Price/Cautionary Quotation Price Not Posted by the *Itayose* Matching Method" Is Displayed
      The quantity of the order on which the relevant quotation is based is displayed.
  ◆ When " Special Quotation Price Posted by the *Itayose* Matching Method " Is Displayed
      The net quantity for the relevant quotation price is displayed.
  ◆ When "Cross Price" Is Displayed
      The order quantity for the cross price is displayed.

☐ Quotation Price
  This screen portion displays the ask quotation prices and the bid quotation prices (except when the underlying index is displayed).
  ◆ The screen portion displays the price according to the pricing unit of the displayed issue (likewise below).
      ⇨ "Chapter 4: Financial Products Traded"
  ◆ The screen portion displays the price of an underlying stock issue that is 100,000 JYen or greater by dropping the lowest-order three digits (likewise below when displaying the price of an underlying stock issue).
  ◆ The screen portion displays a Cautionary/Special Quotation Symbol (U, K, u, k) before the price when displaying a cautionary/special quotation price.
  ◆ The screen portion displays a Cross Symbol (#, *) before the price when displaying a cross price (except with an underlying stock issue).

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☐ Cursor

The "Cursor" is displayed in the "Registration Issue Number and Issue Name Fields," "Quotation Price Field" and "Quotation Quantity Field."

- The cursor can be moved by pressing the arrow keys.
- By positioning the display of the cursor, it is possible to automatically set up the relevant display position information when displaying the "New Order Entry Window," and to omit the step of inputting a query when querying the "Board Details."

⇨ "9-2-2 Order Placement from the New Order Entry Window"

☐ Current Price

This screen portion displays the current price.

- An "E" is displayed if the price is a closing price, "Board" is displayed if the price involves the *zaraba* or *itayose* method, and "Halt" is displayed if trading is halted.

☐ Current Price Time

This screen portion displays the contract time of the current price.

☐ Day-to-Day Change

This screen portion displays the day-to-day change in the current price.

☐ Supplementary Information

Either "All Day Four Prices," "Four Prices by Session" or "Time Series (Three)" of the displayed issue is selected and displayed.

- If four prices are displayed, then "Opening Price," "High Price" and "Low Price" are displayed (in that order).
  ⇨ "6-1 Setup of Supplementary Information Type of the Boards & Quotations Screen"

☐ Current Day's Trading Volume

This screen portion displays the current days trading volume (except when the underlying index is displayed).

☐ Scroll Buttons

These are displayed only on a Quotation Screen when the split screen mode display is "Board x 2 + Quotation" or "Board x 3 + Quotation."

| | |
|---|---|
| ▲ | Clicking this button with the mouse scrolls the issues upward one issue at a time in registration issue number order. |
| ▼ | Clicking this button with the mouse scrolls the issues downward one issue at a time in registration issue number order. |

⇨ 7-4-2 Scrolling of Quotation Screen

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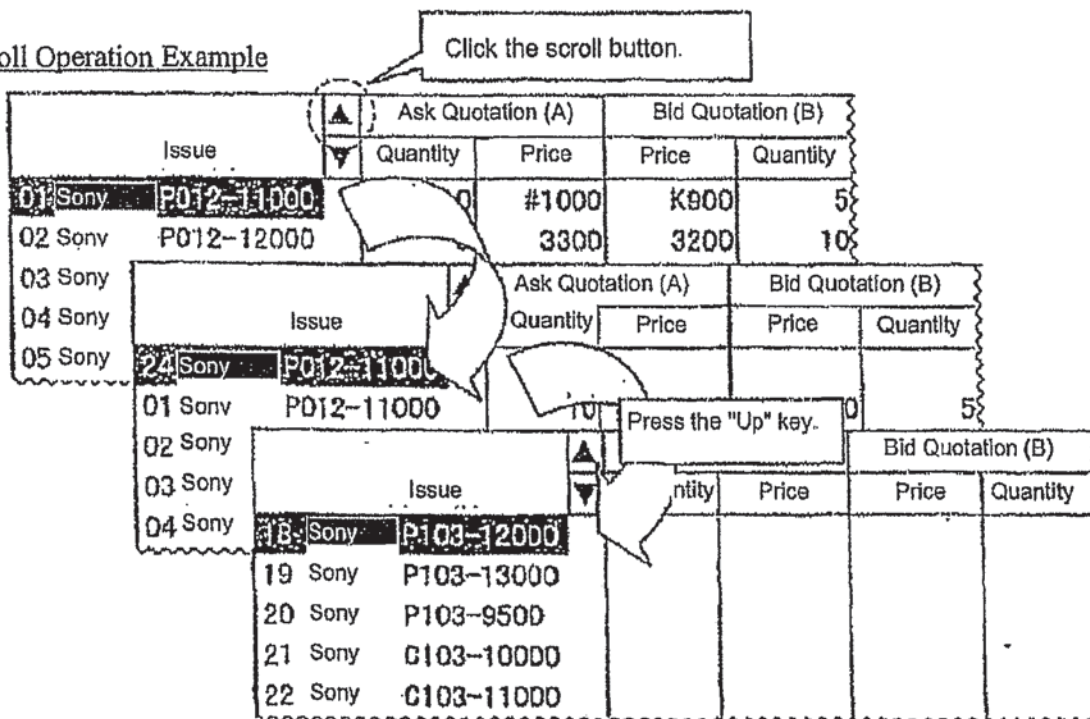### 7-4-2 Scrolling of Quotation Screen

The Quotation Screen that is displayed when a split screen mode (not full screen mode) is selected displays quotation information only for just 11 issues out of the maximum number of issues that can be registered in one page.

Furthermore, by vertically scrolling the Quotation Screen, it is possible to display the quotation information of those issues that are registered in the relevant page but not displayed.

The Quotation Screen is scrolled by any of the methods below.

* Use the mouse to click the "▲" or "▼" scroll button on the Board [sic] Screen.

   → The screen scrolls "1 Issue" at a time.

* Vertically move the cursor on a Board [sic] Screen by pressing an arrow key on the keyboard.

   → The screen scrolls "1 Issue" at a time.

* Press the "Up" or "Down" key on the keyboard.

   → The screen scrolls "6 Issues" at a time.

Scroll Operation Example

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# APPENDIX B

# Harold Abilock

*2087 Ferry Road · Charlotte, VT 05445*
*Tel: (802) 425-6145 Fax: (802) 329-2146 E-mail: habilock@japanlink-trans.com*

**SUMMARY**
- **Over 25 years of Japanese-English translation experience in the fields of science and technology, with a focus on intellectual property**
- **B.S. in Computer Science with a solid background in physics and electronics**

**EXPERTISE**

| SCIENCE & TECHNOLOGY | | LEGAL | BUSINESS |
|---|---|---|---|
| • Computers/IT | • Physics (esp., optics) | • Contracts | • Brochures |
| • Electrical/Electronics | • Semiconductors | • Litigation | • Catalogs |
| • Mechanical (esp., automotive) | • Telecommunications | • Patents | • Manuals |

**PROFESSIONAL EXPERIENCE**

**JAPANLINK TRANSLATIONS** · *Owner* · *1994–2000, 2002–Present*
*2087 Ferry Road, Charlotte, VT 05445*

JapanLink Translations is a boutique Japanese-English translation firm serving clients in business and industry across a broad range of technical, scientific, and commercial fields.

- Full-time translator with extensive experience in patents, litigation, technical documents, journal publications, and product literature.
- Strong emphasis on quality control.
  - I understand the importance of meeting deadlines without sacrificing quality. I work with an experienced in-house editor to thoroughly check each translation for accuracy, completeness, terminological consistency, and style.
  - Quality control takes up nearly 40% of the overall effort of every job.
- Extensive collection of up-to-date reference works and dictionaries.

**ipCAPITAL GROUP, INC.** · *Senior Manager* · *2000–2002*
*400 Cornerstone Drive, Suite 325, Williston, VT 05495*

ipCapital Group offers a full suite of intellectual property (IP) services to convert unrealized intellectual capital into tangible, manageable assets.

- Led project teams in providing clients with intellectual property asset management services, including IP audits, invention documentation, technology assessments, competitive analyses, strategy development, and out-licensing packages.
- Developed new IP methodologies and tools, provided in-house training for consultants, and directed business development in the computer and new media markets.

**ISHIDA CO., LTD.** · *Translator & IT Manager* · *1984–1990*
*44 Sanno-cho, Shogoin, Sakyo-ku, Kyoto, Japan 606*

Ishida (formerly *Ishida Scales*) is a leading manufacturer of weighing and packaging equipment for the manufacturing, inspection, distribution, and retail industries.

*Translation*
- Managed production of technical manuals, including translation, graphics, creation of camera-ready copy, and coordination with printing companies.
- Translated business documents, contracts, and technical reports. Translated and developed PR materials, e.g., catalogs, videos, and company brochure.

*IT Management*
- Directed the introduction of a computer network and software for export sales and marketing. Developed analytic software tools to refine marketing decisions and reduce inventory.
- Managed network resources, ensured system security, and performed system administrator functions.

*Page 1 of 2*

**SELF EMPLOYED** · *Translator & Computer Consultant* · *1980–1984*
*Matsugasaki, Sakyo-ku Kyoto, Japan 606*

- Translated technical documents and academic papers in the fields of electronics, computers, physics, mathematics, and medicine.
- Provided systems analysis and training to medium-sized enterprises.
- Conducted computer training seminars in Japanese at various educational institutions.

**BROOKHAVEN NATIONAL LABORATORY** · *Systems Analyst* · *1974–1979*
*Department of Energy and Environment, Upton, NY 11973*

Developed a multi-objective dynamic linear programming model used to assess cost, environment, and security tradeoffs for energy policy analysis. This work was supported by the International Energy Agency (Paris) and the U.S. federal government.

**EDUCATION**

**BROOKLYN TECHNICAL HIGH SCHOOL** · *Brooklyn, NY* · *1966–1970*
Brooklyn Tech is one of the nation's premier high schools for science and technology. Received a *Technical Diploma* and graduated in the top 10% of my class.

**STATE UNIVERSITY OF NEW YORK AT STONY BROOK** · *1970–1974*
Received a *B.S. in Computer Science* with a focus on optimization and operations research. Pursued studies in physics, Asian studies, and philosophy.

**DOSHISHA UNIVERSITY** · *Kyoto, Japan* · *1973–1974*
Selected as one of two students from SUNY to study for one year at Doshisha University (Associated Kyoto Program) under full scholarship. Received intensive language training and concentrated on Japanese philosophy, literature, and history.

**KYOTO INSTITUTE FOR JAPANESE LANGUAGE** · *Kyoto, Japan* · *1979–1981*
Attended intensive advanced-level Japanese language program.

**NAKAMURA GAKKO** · *Kyoto, Japan* · *1982*
Studied Japanese-English translation for one year under the school headmaster, a professional translator with 35 years of translation experience.

**PUBLICATIONS**

(2006). *Managing and Directing Innovation in the Holography Business*, Photonics West—SPIE Symposium on Optoelectronics, San Jose, CA.

(2005). *End-to-End Quality in Patent Translation: Confessions of a Quality Fanatic*, International Japanese/English Translation Conference (IJET-16), University of Chicago Graham School of General Studies, Chicago, IL.

(2002). *IP Worst Practices*, Harvard Business School (Association of Orange County) Entrepreneurs Conference, Anaheim, CA.

(1983). *User's Guide for MARKAL*, Brookhaven National Laboratory, Upton, NY and Kernforschungsanlage Jülich (KFA), Jülich, Germany.

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(1979). *Dynamic Energy System Optimization Model*, prepared by Brookhaven National Laboratory for the Electric Power Research Institute (EPRI), Palo Alto, CA.

(1977) *IRATE: An Interactive Computer Program for Access to the Energy System Network Simulator (ESNS) Model*, prepared by Brookhaven National Laboratory for the U.S. DOE.

(1976). *A Study to Assess the Application of Shadow Pricing Techniques to National Energy Resource Planning*, Brookhaven National Laboratory, Upton, NY.

**PROFESSIONAL AFFILIATIONS**

American Translators Association (ATA)—Japanese Language Division (JLD)
Institute of Electrical and Electronics Engineers (IEEE)
Japan-America Society of Vermont (JASV)
Japan Association of Translators (JAT)